REMARKS

Initially, Applicants would like to express appreciation to the Examiner for the detailed Final Official Action provided and for the acknowledgment of Applicants' Claim for Priority and receipt of the certified copies of the priority documents. Applicants also note that the Examiner has not indicated that the drawings have been approved by the Official Draftsperson on a Form PTO-948. The Examiner is thus requested to indicate that Applicants' drawings are acceptable in the next Official Action.

Upon entry of the above amendment, claim 1 will have been amended. Claims 1-20 remain pending in the application. Claims 5 and 7-20 have been withdrawn from consideration by the Examiner, leaving claims 1-4 and 6 for consideration.

Reconsideration of the rejections and allowance of the pending application in view of the foregoing amendment and following remarks are respectfully requested.

The Examiner has objected to claim 1 for minor informalities. In response, Applicants have amended claim 1 as suggested by the Examiner. Accordingly, in view of the above noted amendments and remarks, it is believed that the objection to claim 1 has been overcome, and Applicants respectfully request reconsideration and withdrawal of the outstanding objection.

The Examiner has rejected claims 1-4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 05-83516 to YASUHITO et al. in view of KOTZAB (U.S. Patent

No. 4,813,915). The Examiner contends that it would have been obvious to modify the tensioner of YASUHITO et al. to provide a greater biasing force in one direction as taught by KOTZAB. The Examiner further states that "it is apparent that a first damping force acting on the arm when the belt is in tension is relatively larger than a second damping force acting on the arm when the belt is slack due to the eccentricity of the spring to the axial center".

However, Applicants note that YASUHITO et al. and KOTZAB fail to teach or suggest the subject matter claimed in claims 1-4 and 6. In particular, claim 1 sets forth an autotensioner including, inter alia, "said torsion coil spring being attached eccentrically to the axial center of said base, one end of said torsion coil spring is connected to said base and the other end of said torsion coil spring is connected to said rocking arm, and said rocking arm being supported to be able to be displaced relative to said base, such that a first damping force acting on said rocking arm when said belt is tensioned is relatively larger than a second damping force acting on said rocking arm when said belt is slack".

In Applicants' claimed invention, the first damping force acting on the rocking arm when the belt is tensioned is larger than the second damping force acting on the rocking arm when the belt is not tensioned. In this regard, the operation of Applicants' claimed invention, including the first and second damping forces, is described in the specification at least on page 18, line 25 through page 23, line 15; and page 36, line 21 through page 38, line 15. In

particular, when the belt is tensioned, a first, larger damping force is provided by a force tilting the "axial center L4 of rocking from the base axial center L1 about the base bottom 32 side" (page 19, lines 11-14). See particularly Figure 5. However, when the belt is not tensioned, a second, smaller damping force is provided since "the axial center L4 of rocking coincides with the base axial center L1 and the force by which the rocking arm 24 pushes the bushing 26 in the pushing direction Z becomes extremely small" (page 22, lines 19-22). See particularly Figure 4. Accordingly, Applicants' claimed invention includes an autotensioner including a torsion coil and a rocking arm such that a first damping force acting on the rocking arm when the belt is tensioned is relatively larger than a second damping force acting on the rocking arm when the belt is slack.

However, as pointed out by the Examiner, the YASUHITO et al. device does not include a torsion spring attached eccentrically to the axial center of the base.

Further, the KOTZAB patent is directed to a belt tensioning device. In the KOTZAB device, a damping force (or friction force) is generated between the inner cylindrical section 19 of the arm 7 and the cylindrical friction bushing 27, by an end "P" of the helical spring 33. See particularly a marked up copy of Figure 1 of the KOTZAB patent, provided as an attachment hereto. As clearly shown in Figure 1, the inner cylindrical portion 19 fits on the roller bearing 22. The inner cylindrical portion 19 is sufficiently long in the axial direction so as not to tilt with respect to the roller bearing 22 or a bearing bushing 9. Additionally,

there is a gap between an outer cylindrical section 18 of the arm 7 and the housing 10. Therefore, the spring force of the helical spring 33 is large, and the range of rotation of the arm 7 may be within 90 degrees. Accordingly, the urging force of the spring 33 on the friction bushing 27 is substantially constant. Therefore, in the KOTZAB device, the damping force is always constant, regardless of the direction of rotation of the arm 7, since the cylindrical section 19 does not tilt and since the spring force is large. Accordingly, the first damping force is equal to the second damping force in the KOTZAB device. Therefore, the KOTZAB patent fails to teach or suggest an autotensioner including, inter alia, "said torsion coil spring being attached eccentrically to the axial center of said base, one end of said torsion coil spring is connected to said base and the other end of said torsion coil spring is connected to said rocking arm, and said rocking arm being supported to be able to be displaced relative to said base, such that a first damping force acting on said rocking arm when said belt is tensioned is relatively larger than a second damping force acting on said rocking arm when said belt is slack", as recited in independent claim 1. Therefore, the KOTZAB patent fails to cure the deficiencies of the YASUHITO et al. device, and even assuming, arguendo, that the teachings of YASUHITO et al. and KOTZAB have been properly combined, Applicants' claimed autotensioner would not have resulted from the combined teachings thereof.

Further, there is nothing in the cited prior art that would lead one of ordinary skill in the art to make the modification suggested by the Examiner in the rejection of claims 1-4 and 6 under 35 U.S.C. § 103(a) over YASUHITO et al. in view of KOTZAB. Thus, the only reason to combine the teachings of YASUHITO and KOTZAB results from a review of Applicants' disclosure and the application of impermissible hindsight. Accordingly, the rejection of claims 1-4 and 6 under 35 U.S.C. § 103(a) over YASUHITO et al. in view of KOTZAB is improper for all the above reasons and withdrawal thereof is respectfully requested.

Applicants submit that dependent claims 2-4 and 6, which are at least patentable due to their dependency from claim 1 for the reasons noted above, recite additional features of the invention and are also separately patentable over the prior art of record based on the additionally recited features. In particular, Applicants submit that none of the cited prior art teaches or suggests an autotensioner including a first damping force having a magnitude 1.5 to 3.5 times the magnitude of the second damping force, as recited in claim 6. Accordingly, claims 2-4 and 6 are each separately patentable for these additional reasons.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of all the rejections, and an early indication of the allowance of claims 1-4 and 6.

SUMMARY AND CONCLUSION

In view of the foregoing, it is submitted that the proposed amendment is proper for entry since it merely corrects a misspelling pointed out by the Examiner and it is also submitted that none of the references of record, considered alone or in any proper combination thereof, anticipate or render obvious Applicants' invention as recited in claims 1-4 and 6. The applied references of record have been discussed and distinguished, while significant claimed features of the present invention have been pointed out.

Accordingly, consideration of the present amendment, reconsideration of the outstanding Final Official Action, and allowance of the present amendment and all of the claims therein are respectfully requested and now believed to be appropriate.

Applicant has made a sincere effort to place the present application in condition for allowance and believe that he has now done so.

Should the Examiner have any questions or comments regarding this response, or the present application, the Examiner is invited to contact the undersigned at the below-listed telephone number.

Respectfully submitted,
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Attachment: marked up copy of Figure 1 of U.S. Patent No. 4,813,915